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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/731,832	12/09/2003	Seyed-Ali Hajimiri	080374-0008 (B78848)	4396
33649	7590	02/03/2006	EXAMINER	
Mr. Christopher John Rourk GODWIN PAPPAS LANGLEY RONQUILLO LLP 1201 Elm Street, Renaissance Tower DALLAS, TX 75270			NGUYEN, KHANH V	
			ART UNIT	PAPER NUMBER
			2817	

DATE MAILED: 02/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

3V

<b>Office Action Summary</b>	<b>Application No.</b> 10/731,832	<b>Applicant(s)</b> HAJIMIRI ET AL.	
	<b>Examiner</b> Khanh V. Nguyen	<b>Art Unit</b> 2817	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 January 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5, 7, 12-14, 16 and 18-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-5, 7, 12-14, 16, 18-25 and 29 is/are allowed.
- 6) ☒ Claim(s) 26-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Objections*

Claims 22, 26, 28, 29 are objected to because of the following informalities:

Claim 22, line 4, "input terminal" and "output terminal" should correctly be

**-- input -- and -- output --.**

Claims 26, 28, 29, line 4, "the load" should correctly be **-- a load --.**

Claim 28, line 6, "input terminal" and "output terminal" should correctly be

**-- input -- and -- output --.**

Claim 29, line 4, "16" should be deleted.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 26, 27 are rejected under 35 U.S.C. 102(e) as being anticipated by Katz et al. (5,221,908).

Regarding claim 26, Katz (Fig. 10) discloses an amplifier circuit comprising: a transistor (18) operable as a common gate amplifier having an input via its source (20) and an output via its drain (22); wherein transistor (18) having an inherent common gate amplifier transconductance and a feedthrough means (310) can reduce transistor noise that it passed on to a load (42), wherein the feedthrough means (310) includes a resistor (1012) can be read as a resistance ( $R_f$ ) which connected between drain (22) and source (20) of transistor (18) can be formed by a resistance  $R_p$  in parallel with drain-source resistance ( $r_{ds}$ ) that is inherent of drain-source resistance of transistor (18).

Regarding claim 27, wherein inductor (410 of Fig. 10) can be read as an inductance ( $L_p$ ).

Claim 26 is rejected under 35 U.S.C. 102(e) as being anticipated by Hong et al. (6,768,380).

Hong et al. (Fig. 4) disclose an amplifier circuit comprising: a transistor (Q2) operable as a common gate amplifier having an input via its source and an output via its drain; wherein transistor (Q2) having an inherent common gate amplifier transconductance and a feedthrough means ( $R_3$ ,  $C_1$ ) can reduce transistor noise that it passed on to a load (32 of Fig. 2), wherein resistor ( $R_3$ ) can be read as a resistance ( $R_f$ ) which connected between drain and source of transistor (Q2) can be formed by a resistance  $R_p$  in parallel with drain-source resistance ( $r_{ds}$ ) that is inherent of drain-source resistance of transistor (Q2).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hong et al. in view of Palmisano et al. (6,278,329).

Hong et al. disclose the claimed invention except having transconductance ( $g_m$ ) a source impedance ( $r_s$ ) is larger than  $1/R_s$ . Hong et al. (Fig. 4) disclose an amplifier circuit comprising: a transistor (Q2) operable as a common gate amplifier having an input via its source and an output via its drain; wherein transistor (Q2) having an inherent common gate amplifier transconductance and a feedthrough means (R3, C1) can reduce transistor noise that it passed on to a load (32 of Fig. 2), wherein resistor (R3) can be read as a resistance ( $R_f$ ) and capacitor (C1) can be read as capacitor ( $C_f$ )

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connected in series between the input and the output of transistor (Q2). Note, claimed subject matters regarding the “real part ...” appears to be a result of series connected resistor  $R_f$  and capacitor  $C_f$ , since Hong et al. disclose similar structure, thereby the real part of the input impedance of the common gate amplifier is also increased.

Palmisano et al. (Figs. 1, 2) disclose resistor (26) operable as a signal source.

Accordingly, it would have been obvious in view of the reference, taken as a whole, to have modified the circuit of Hong et al. to have included signal source, as taught by Palmisano et al. Such a modification would have imparted the advantageous benefit of provided respective impedance for input voltage source, thereby suggesting the obviousness of such a modification.

### ***Allowable Subject Matter***

Claims 1-5, 7, 12-14, 16, 18-25, 29 are allowed.

Claims 1-5, 7, 12-14, 16, 18-25, 29 call for, among others, the equations/expressions as claimed.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh V. Nguyen whose telephone number is (571) 272-1767. The examiner can normally be reached from 8:00 AM - 3:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (571) 272-1769. The fax phone numbers

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for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Khanh Van Nguyen', with a long horizontal flourish extending to the right.

**KHANH VAN NGUYEN**  
**PRIMARY EXAMINER**  
**Art Unit: 2817**